ATTACHMENT 4

Trinity River Restoration Program

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May 23, 2016

Mr. David Murillo, Regional Director
Mid-Pacific Region
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Dear Mr. Murillo,

During the summer months, water released from Trinity Reservoir increases by 2-3°F as it transits Lewiston Reservoir before being released to the Trinity River, or diverted through the Judge Francis Carr Tunnels and released to Whiskeytown Reservoir. The heating affects both Trinity River species, and Sacramento River species. During periods of drought, and in the future under virtually all climate warming scenarios, the 2-3°F increase in water temperature that occurs in Lewiston Reservoir will likely elevate temperatures to unsuitable levels for salmonids for which Reclamation has Tribal Trust, Public Trust, and Endangered Species Act (ESA) responsibilities. For example, water released from the Spring Creek Powerhouse and water released from Whiskeytown Reservoir into Clear Creek in 2015 was so warm that it was problematic for winter-run and spring-run Chinook salmon management on the Sacramento River. Similarly in 2015, Reclamation failed to meet Trinity River temperature compliance for at least 23 days of the State Water Resources Control Board WR 90-5 temperature targets (SWRCB 1990), as well as 34 days of the temperature targets in the ESA consultation between NMFS and Reclamation (NMFS 2000). While heating in Lewiston Reservoir was not the sole cause of higher than normal water temperatures, less heating of water after release from Trinity Reservoir would have likely resulted in Reclamation meeting temperature requirements more frequently on the Trinity and Sacramento rivers in 2015.

Reclamation has long recognized that water released from Trinity Reservoir warms as it transits Lewiston Reservoir, and funded the Lewiston Temperature Intermediate Technical Memorandum completed in 2012 (Reclamation 2012). That study outlined six alternatives, with technical considerations and preliminary cost estimates for each alternative. In our June 16, 2015 letter to you, the Trinity Management Council (TMC) requested that you take the next steps as outlined in Reclamation (2012)-specifically, confirmation of the study authority, goals, and the alternatives to be carried forward for more detailed evaluation (Section 5.0, page 32). The alternatives considered in Reclamation (2012) are a good foundation but additional options may also need to be considered. A comprehensive solution that maximizes the cold water pool

volume in Trinity Reservoir and minimizes heating of water after being released from Trinity Dam will likely have substantial benefits to both Trinity River and Sacramento River species, and aid in Reclamation's compliance with temperature targets on both rivers. Implementing such a solution will also contribute to recovery of salmonids in the Trinity River as the Recovery Plan for SONCC coho salmon (NMFS 2014) includes the following two recovery actions (Chapter 39, pg 39-31):

- SONCC-UTR.10.1.13.1-Study and evaluate methods to reduce thermal heating in Lewiston Reservoir
- SONCC-UTR.10.1.13.2-Implement plan to reduce thermal heating based on findings

To aid Reclamation in the identification and implementation of an alternative, the following are the TMC's desired outcomes:

1. More efficient use of water to meet temperature and fish production objectives in the Trinity and Sacramento rivers.
2. Increased conservation of Trinity Reservoir cold water pool across multi-year droughts
3. No additional heating of water between following release from Trinity Reservoir greater than that which would occur in a river system.
4. No additional heating of water between Trinity Dam and the Carr Tunnel outlets in Whiskeytown Reservoir.
5. Improved precision of flow releases to the Trinity River
6. Expanded flexibility in the timing of diversions to Whiskeytown Reservoir
7. Temperature benefits to Trinity River species including Threatened SONCC coho salmon, Chinook salmon, and steelhead
8. Temperature benefits to Sacramento River species including Endangered Sacramento River Winter-Run Chinook Salmon and Threatened Central Valley spring-run Chinook salmon
9. Increased natural production of salmonids in the Trinity River, particularly spring-run chinook salmon and coho salmon

The TMC appreciates the steps that Reclamation has taken and the funding that has been committed to identify alternatives that could be used to help solve the problematic water heating in Lewiston Reservoir. We look forward to Reclamations more refined studies on this problem and the selection of an alternative that will benefit salmonids of the Trinity and Sacramento rivers.

Sincerely,

Federico Barajas, Chair
Trinity Management Council

References

National Marine Fisheries Service. 2000. Biological Opinion for the Trinity River Mainstem Fishery Restoration EIS and its Effects on Southern Oregon/Northern California Coasts Coho Salmon, Sacramento River Winter-run Chinook Salmon, Central Valley Spring-run Chinook Salmon, and Central Valley Steelhead. National Marine Fisheries Service, West Coast Region. 57 pp. Available from the National Marine Fisheries Service, West Coast Region. Seattle, Washington.

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Reclamation. 2012. Lewiston Temperature Management Intermediate Technical Memorandum. Lewiston Reservoir, Trinity County, California. US Bureau of Reclamation. 73pp.

SWRCB (State Water Resources Control Board). 1990. Order WR-90-5, Order Setting Terms and Conditions for Fishery Protection and Setting a Schedule for Completion of Tasks. http://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/1990/wro90-05.pdf.